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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/772,518

Applicant(s)

DYE ET AL.

Examiner

Qing Chen

Art Unit

2191

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 59-104 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 59-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office action is in response to the amendment filed on March 17, 2009.
2. **Claims 59-104** are pending.
3. **Claims 59-61, 63-65, 68, 69, 71, 81, 91, 94, 96, 97, 99, and 102** have been amended.
4. **Claims 1-58** have been canceled.
5. The objections to Claims 59, 81, 91, and 96-103 are withdrawn in view of Applicant's amendments to the claims.
6. The 35 U.S.C. § 112, second paragraph, rejection of Claim 102 is withdrawn in view of Applicant's amendments to the claim. However, Applicant's amendments to the claims fail to fully address the rejection to Claim 94 due to insufficient antecedent basis. Accordingly, this rejection is maintained and further explained hereinafter.
7. It is noted that Claims 97, 98, and 101 contain amendments that are submitted with no markings to indicate the changes that have been made relative to the immediate prior version of the claims.
8. It is noted that Claims 98 and 101 appear to contain proposed amendments. However, the claims still bear the "Previously Presented" status identifier.

Response to Amendment

Claim Objections

9. **Claim 98** is objected to because of the following informalities:
 - **Claim 98** recites the limitation "displaying of the graphical program." Applicant is advised to change this limitation to read "displaying the graphical user interface of the

graphical program” for the purpose of providing it with proper explicit antecedent basis and/or keeping the claim language consistent throughout the claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 94, 97, and 101** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 94 recites the limitation “the input of the at least one input variable.” There is insufficient antecedent basis for this limitation in the claim. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading “the user input of the at least one input variable” for the purpose of further examination.

Claim 97 recites the limitation “said receiving information describing.” The claim is rendered indefinite because it is unclear to the Examiner what is being described by the received information. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading “said receiving information describing the graphical user interface” for the purpose of further examination.

Claim 101 recites the limitation “wherein of the graphical program.” This is awkward claim language and thus, rendered the claim indefinite. In the interest of compact prosecution, the Examiner subsequently interprets this limitation as reading “wherein the graphical user interface of the graphical program” for the purpose of further examination.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claims 59-104** are rejected under 35 U.S.C. 103(a) as being unpatentable over US **5,801,689** (hereinafter “Huntsman”) in view of US **4,901,221** (hereinafter “Kodosky”).

As per **Claim 59**, Huntsman discloses:

- establish a network connection with a client computer system over a network (*see Column 9: 12-14, “The second computer 25 is connected to the first computer over the internet 31 ...”*);
- receive user input from the client computer system indicating a graphical program for execution (*see Column 9: 14-28, “A standard WWW “Web” browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the “starter URL” as specified by the coordinated naming convention 5.*

URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer.”);

- execute the graphical program (*see Column 8: 20-23, “The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19.”);*

- send information describing a user interface of the graphical program over the network to the client computer system after establishing the network connection with the client computer system, wherein the information describing the user interface is useable by the client computer system to display the user interface on the client computer system (*see Column 8: 20-23, “The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19.”; Column 9: 31-41, “In response to the starter URL, the server program 21 builds a new file, a GIF image file containing the screen image of the GUI on the first computer, and returns the data of REMOTE.HTM.”); and*

- send information regarding the graphical program over the network to the client computer system after establishing the network connection with the client computer system, wherein the information regarding the graphical program is useable by the client computer system to display the graphical program on the client computer system (*see Column 9: 31-50, “REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image. In the preferred embodiment, the GIF file thus built is a 256 color image of the GUI screen of the first computer 19. The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and*

retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."");

- wherein the user interface is operable to facilitate interaction between a user and the graphical program over the network (*see Column 9: 42-50, "The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image."*).

However, Huntsman does not disclose:

- wherein the graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function, and wherein said executing the graphical program comprises executing the block diagram; and
- information regarding the block diagram of the graphical program.

Kodosky discloses:

- wherein a graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function, and wherein executing the graphical program comprises executing the block diagram (*see Column 7: 44-59, "The execution subsystem 24 assigns at least one value to the input variable and executes the execution instructions to produce a value for the output variable. The control processor 26 implements the block diagram editor 22 and the execution subsystem 24 of the preferred embodiment."*; Column 8: 8-23, *"The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*); and

- information regarding the block diagram of the graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to have the graphical program as a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function, and executing the graphical program comprises executing the block diagram; and to include information regarding the block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 60**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- provide information indicating a plurality of graphical programs to the client computer system over the network, wherein the information indicating a plurality of graphical programs is usable by the client computer system to display information indicating the plurality of graphical programs (*see Column 8: 20-23, "The executing GUI program 23 can be any MS-*

Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19.”); and

- wherein, in indicating the graphical program for execution, the user input selects the graphical program from the plurality of graphical programs (*see Column 9: 47-50, “The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image.”*).

As per **Claim 61**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- receive user input to the graphical program from the client computer system over the network (*see Column 9: 42-50, “The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image.”*); and

- provide the user input to the graphical program (*see Column 9: 50-57, “The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”*);

- wherein the graphical program is operable to respond to the user input (*see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7,*

and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”).

As per **Claim 62**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- wherein the graphical program produces a first output state (*see Column 9: 31-41, “In response to the starter URL, the server program 21 builds a new file, a GIF image file containing the screen image of the GUI on the first computer, and returns the data of REMOTE.HTM.”*); and

- wherein said sending information describing a user interface of the graphical program comprises sending information indicative of the first output state (*see Column 9: 42-50, “The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML “clickable” image.”*).

As per **Claim 63**, the rejection of **Claim 62** is incorporated; and Huntsman further discloses:

- wherein the graphical program produces a second output state after the graphical program produces the first output state (*see Column 9: 61-67 to Column 10: 1-6, “The server*

control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”); and

- wherein the program instructions are further executable to send a user interface update indicating the second output state to the client computer system (*see Column 10: 6-10, “Moments later, a user at the second computer 25 will typically select the “REFRESH” hypertext link which sends a reference of REMOTE.HTM of FIG. 10 to the first computer, repeating the behavior just described.”*).

As per **Claim 64**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- establish a network connection with each of a plurality of client computer systems (*see Column 8: 11-15, “One or more second computers 25 running a standard, off-the-shelf hypertext browser program 27, can effectuate remote control using the standard, widely installed networking protocols, including those used in the internet [9].”*); and

- send information describing a user interface of the graphical program over the network to each of the plurality of client computer systems after establishing the network connection with each of the plurality of client computer systems (*see Column 9: 42-50, “The browser 27 on the second computer 25 will decode the HTML document file, and locate the*

references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image.").

As per **Claim 65**, the rejection of **Claim 64** is incorporated; and Huntsman further discloses:

- send information regarding the graphical program over the network to each of the plurality of client computer systems after establishing the network connection with each of the plurality of client computer systems, wherein the information regarding the graphical program is useable by each of the plurality of client computer systems to display the graphical program (*see Column 9: 31-50, "REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image. In the preferred embodiment, the GIF file thus built is a 256 color image of the GUI screen of the first computer 19. The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*).

However, Huntsman does not disclose:

- information regarding the block diagram of the graphical program.

Kodosky discloses:

- information regarding a block diagram of a graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual*

representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include information regarding a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by sending block diagram information between the two computer systems.

As per **Claim 66**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- wherein the graphical program executes to perform a measurement or automation function (*see Column 1: 29-34, “GUI environments tend to use a pointing device, like a mouse, in addition to a keyboard. Instead of typing a textual command, the user of a graphical interface typically selects a button or menu selection with a pointing device such as a mouse and “clicks” on his selection.”).*

As per **Claim 67**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- wherein the network is the Internet (*see Column 9: 12-14, “The second computer 25 is connected to the first computer over the internet 31 ...”).*

As per **Claim 68**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- wherein the information describing the user interface is useable by the client computer system to display the user interface of the graphical program on a web browser (*see Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*); and

- wherein the information regarding the graphical program is useable by the client computer system to display the graphical program on the web browser (*see Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*).

However, Huntsman does not disclose:

- information regarding the block diagram of the graphical program.

Kodosky discloses:

- information regarding a block diagram of a graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include information regarding a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by displaying the block diagram information for a user to control.

As per **Claim 69**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- receive user input specifying an edit to the graphical program from the client computer system over the network (*see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to by the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click."*); and
- edit the graphical program according to the user input specifying the edit (*see Column 9: 61-67 to Column 10: 1-6, "The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform*

other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”).

However, Huntsman does not disclose:

- an edit to the block diagram of the graphical program.

Kodosky discloses:

- an edit to a block diagram of a graphical program (*see Column 18: 47-51, “FIG. 25 shows the EDIT menu selections ... CLEAR is useful for removing items from the active window, e.g., selected wires and structures from the block diagram window, or controls from the front panel window.”*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman’s invention to include an edit to a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to edit the block diagram information from a remote location.

As per **Claim 70**, the rejection of **Claim 59** is incorporated; however, Huntsman does not disclose:

- wherein the user interface of the graphical program comprises at least one input variable icon for providing inputs to the block diagram and at least one output variable icon for displaying outputs produced by the block diagram.

Kodosky discloses:

- wherein a user interface of a graphical program comprises at least one input variable icon for providing inputs to a block diagram and at least one output variable icon for displaying outputs produced by the block diagram *(see Column 8: 13-19, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42.")*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include wherein the user interface of the graphical program comprises at least one input variable icon for providing inputs to a block diagram and at least one output variable icon for displaying outputs produced by the block diagram. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to configure input and output data for a block diagram via a user interface.

As per **Claim 71**, the rejection of **Claim 59** is incorporated; and Huntsman further discloses:

- receive input of at least one input variable from the client computer system over the network *(see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to*

the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”); and

- *providing the output of the at least one output variable to the client computer system over the network for display (see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”).*

However, Huntsman does not disclose:

- the block diagram executing using the input of the at least one input variable; and
- the block diagram generating an output of at least one output variable.

Kodosky discloses:

- *a block diagram executing using the input of the at least one input variable (see Column 13: 47-55, “... execution instructions can be constructed by constructing a visual display in which at least one input variable produces at least output variable according to a displayed procedure.”); and*

- *the block diagram generating an output of at least one output variable (see Column 13: 47-55, “... execution instructions can be constructed by constructing a visual display in*

which at least one input variable produces at least output variable according to a displayed procedure.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include a block diagram executing using the input of the at least one input variable; and the block diagram generating an output of at least one output variable. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by executing the block diagram from a remote location using input and output data for the block diagram configured by a user.

As per **Claim 72**, the rejection of **Claim 59** is incorporated; however, Huntsman does not disclose:

- wherein the graphical program implements a virtual instrument; and
- wherein the user interface of the graphical program comprises a front panel of the virtual instrument.

Kodosky discloses:

- wherein a graphical program implements a virtual instrument (*see Figure 3: 40*); and
- wherein a user interface of the graphical program comprises a front panel of the virtual instrument (*see Figure 3: 42*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to

modify Huntsman's invention to include wherein the graphical program implements a virtual instrument; and wherein the user interface of the graphical program comprises a front panel of the virtual instrument. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 73**, Huntsman discloses:

- executing the graphical program on the first computer, wherein the first computer and the second computer are connected over a network (*see Column 8: 20-23, "The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."; Column 9: 12-14, "The second computer 25 is connected to the first computer over the internet 31 ..."*);
- providing information describing the user interface of the graphical program to the second computer during said executing, wherein said providing comprises the first computer providing the information describing the user interface of the graphical program over the network to the second computer, and wherein the information describing the user interface is useable by the second computer to display the user interface of the graphical program on the second computer (*see Column 9: 31-41, "In response to the starter URL, the server program 21 builds a new file, a GIF image file containing the screen image of the GUI on the first computer, and returns the data of REMOTE.HTM."*); and
- providing information regarding the graphical program to the second computer over the network, wherein said providing comprises the first computer providing the information

regarding the graphical program over the network to the second computer, wherein the information regarding the graphical program is useable by the second computer to display the graphical program on the second computer (*see Column 8: 20-23, "The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."*; *Column 9: 31-50, "REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image. In the preferred embodiment, the GIF file thus built is a 256 color image of the GUI screen of the first computer 19. The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*);

- wherein the user interface facilitates interaction between a user of the second computer and the graphical program executing on the first computer (*see Column 9: 42-50, "The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image."*).

However, Huntsman does not disclose:

- wherein the graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function, and wherein said executing the graphical program comprises executing the block diagram; and
- information regarding the block diagram of the graphical program.

Kodosky discloses:

- wherein a graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function, and wherein said executing the graphical program comprises executing the block diagram (*see Column 7: 44-59, "The execution subsystem 24 assigns at least one value to the input variable and executes the execution instructions to produce a value for the output variable. The control processor 26 implements the block diagram editor 22 and the execution subsystem 24 of the preferred embodiment."; Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*); and
- information regarding the block diagram of the graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to have the graphical program as a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function, and wherein said executing the graphical program comprises executing the block diagram; and to include information regarding the block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control

block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 74**, the rejection of **Claim 73** is incorporated; and Huntsman further discloses:

- providing information describing the user interface of the graphical program to a plurality of computers over the network during said executing, where the information describing the user interface of the graphical program is useable by each of the plurality of computers to display the user interface of the graphical program (*see Column 8: 11-15, "One or more second computers 25 running a standard, off-the-shelf hypertext browser program 27, can effectuate remote control using the standard, widely installed networking protocols, including those used in the internet [9]."; Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*).

As per **Claim 75**, the rejection of **Claim 73** is incorporated; and Huntsman further discloses:

- wherein the information describing the user interface is useable by the second computer to display the user interface of the graphical program on a web browser of the second computer (*see Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file*

containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."); and

- wherein the information regarding the graphical program is useable by the second computer to display the graphical program on the web browser of the second computer (*see Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image.").*

However, Huntsman does not disclose:

- information regarding the block diagram of the graphical program.

Kodosky discloses:

- information regarding a block diagram of a graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42.").*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include information regarding a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by displaying the block diagram information for a user to control.

As per **Claim 76**, the rejection of **Claim 73** is incorporated; and Huntsman further discloses:

- the graphical program executing on the first computer responding to user input received to the graphical program via the displayed user interface on the second computer; wherein the user input is provided to the first computer over the network (*see Column 9: 42-57, "The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image. The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click."*).

As per **Claim 77**, the rejection of **Claim 73** is incorporated; and Huntsman further discloses:

- wherein the graphical program produces a second output state after the graphical program produces a first output state (*see Column 9: 61-67 to Column 10: 1-6, "The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and*

KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”); and

- providing a user interface update over the network indicating the second output state, where the user interface update is useable by the second computer to update the user interface displayed on the second computer (*see Column 10: 6-10, “Moments later, a user at the second computer 25 will typically select the “REFRESH” hypertext link which sends a reference of REMOTE.HTM of FIG. 10 to the first computer, repeating the behavior just described.”*).

As per **Claim 78**, the rejection of **Claim 73** is incorporated; and Huntsman further discloses:

- receiving user input specifying an edit to the graphical program to the first computer from the second computer over the network (*see Column 9: 50-57, “The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”*); and

- editing the graphical program according to the user input specifying the edit, wherein said editing is performed by the first computer (*see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming*

convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7. ”).

However, Huntsman does not disclose:

- an edit to the block diagram of the graphical program.

Kodosky discloses:

- an edit to a block diagram of a graphical program (*see Column 18: 47-51, “FIG. 25 shows the EDIT menu selections ... CLEAR is useful for removing items from the active window, e.g., selected wires and structures from the block diagram window, or controls from the front panel window. ”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman’s invention to include an edit to a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to edit the block diagram information from a remote location.

As per **Claim 79**, the rejection of **Claim 73** is incorporated; and Huntsman further discloses:

- receiving input of at least one input variable to the first computer from the second computer over the network (*see Column 9: 50-57, “The WWW browser, in accordance with*

HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”); and

- providing the output of the at least one output variable to the second computer over the network, wherein the output is displayable on the second computer (*see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”).*

However, Huntsman does not disclose:

- wherein the user interface of the graphical program comprises at least one input variable icon for providing inputs to the block diagram and at least one output variable icon for displaying outputs produced by the block diagram;
- the block diagram executing using the input of the at least one input variable; and
- the block diagram generating an output of at least one output variable.

Kodosky discloses:

- wherein a user interface of a graphical program comprises at least one input variable icon for providing inputs to a block diagram and at least one output variable icon for displaying

outputs produced by the block diagram (see Column 8: 13-19, “The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42.”);

- the block diagram executing using the input of the at least one input variable (see Column 13: 47-55, “... execution instructions can be constructed by constructing a visual display in which at least one input variable produces at least output variable according to a displayed procedure.”); and

- the block diagram generating an output of at least one output variable (see Column 13: 47-55, “... execution instructions can be constructed by constructing a visual display in which at least one input variable produces at least output variable according to a displayed procedure.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman’s invention to include wherein the user interface of the graphical program comprises at least one input variable icon for providing inputs to a block diagram and at least one output variable icon for displaying outputs produced by the block diagram; the block diagram executing using the input of the at least one input variable; and the block diagram generating an output of at least one output variable. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to configure input and output data for a block diagram via a user interface and

executing the block diagram from a remote location using input and output data for the block diagram configured by the user.

As per **Claim 80**, the rejection of **Claim 73** is incorporated; however, Huntsman does not disclose:

- wherein the graphical program implements a virtual instrument; and
- wherein the user interface of the graphical program comprises a front panel of the virtual instrument.

Kodosky discloses:

- wherein a graphical program implements a virtual instrument (*see Figure 3: 40*); and
- wherein a user interface of the graphical program comprises a front panel of the virtual instrument (*see Figure 3: 42*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include wherein the graphical program implements a virtual instrument; and wherein the user interface of the graphical program comprises a front panel of the virtual instrument. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 81**, Huntsman discloses:

- a first computer (*see Figure 4: 19*), comprising:

- a processor (see Figure 4: 19); and
- a memory (see Figure 4: 19), coupled to the processor;
- wherein the first computer is operable to couple to a network (see Figure 4: 19 and 31);
- wherein the memory stores a graphical program (see Column 8: 20-23, *"The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."*);
- wherein the first computer is operable to execute the graphical program and provide information describing a user interface of the graphical program over the network to a second computer during said executing (see Column 9: 31-41, *"In response to the starter URL, the server program 21 builds a new file, a GIF image file containing the screen image of the GUI on the first computer, and returns the data of REMOTE.HTM."*);
- wherein the information describing the user interface over the network is useable by the second computer to display the user interface of the graphical program (see Column 9: 42-50, *"The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*);
- wherein the user interface facilitates interaction between a user of the second computer and the graphical program executing on the first computer (see Column 9: 42-50, *"The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image."*); and

- wherein the first computer is operable to provide information regarding the graphical program over the network to the second computer, wherein the information regarding the graphical program is useable by the second computer to display the graphical program on the second computer (*see Column 8: 20-23, "The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."; Column 9: 31-50, "REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image. In the preferred embodiment, the GIF file thus built is a 256 color image of the GUI screen of the first computer 19. The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*).

However, Huntsman does not disclose:

- wherein the graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function;
 - wherein said executing the graphical program comprises executing the block diagram;
- and
- information regarding the block diagram of the graphical program.

Kodosky discloses:

- wherein a graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides*

a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42.”);

- wherein said executing the graphical program comprises executing the block diagram (see Column 7: 44-59, “The execution subsystem 24 assigns at least one value to the input variable and executes the execution instructions to produce a value for the output variable. The control processor 26 implements the block diagram editor 22 and the execution subsystem 24 of the preferred embodiment.”); and

- information regarding the block diagram of the graphical program (see Column 8: 8-23, “The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman’s invention to have the graphical program as a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function; wherein said executing the graphical program comprises executing the block diagram; and to include information regarding the block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 82**, Huntsman discloses:

- receive user input at a first computer indicating a graphical program, wherein the graphical program is stored on a server computer (*see Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer."*);
- provide the user input indicating the graphical program over a network to the server computer (*see Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer."*);
- receive information describing a user interface of the graphical program from the server computer over the network during execution of the graphical program on the server computer (*see Column 9: 31-41, "In response to the starter URL, the server program 21 builds a new file, a GIF image file containing the screen image of the GUI on the first computer, and returns the data of REMOTE.HTM."*);
- receive information regarding the graphical program from the server computer over the network (*see Column 8: 20-23, "The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the*

foreground of the first computer 19.”; Column 9: 31-41, “REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image. In the preferred embodiment, the GIF file thus built is a 256 color image of the GUI screen of the first computer 19.”);

- display the user interface of the graphical program at the first computer based on the information describing a user interface (*see Column 9: 42-50, “The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML “clickable” image.”); and*

- display the graphical program at the first computer based on the information regarding the graphical program (*see Column 9: 42-50, “The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML “clickable” image.”);*

- wherein the user interface is operable to facilitate interaction between a user and the graphical program executing on the server computer (*see Column 9: 42-50, “The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image.”).*

However, Huntsman does not disclose:

- wherein the graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function; and

- information regarding the block diagram of the graphical program.

Kodosky discloses:

- wherein a graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function (*see Column 7: 44-59, "The execution subsystem 24 assigns at least one value to the input variable and executes the execution instructions to produce a value for the output variable. The control processor 26 implements the block diagram editor 22 and the execution subsystem 24 of the preferred embodiment."*; *Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*); and
- information regarding the block diagram of the graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to have the graphical program as a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function; and to include information regarding the block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to

remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 83**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- wherein the graphical program executes to perform a measurement or automation function (see Column 1: 29-34, "GUI environments tend to use a pointing device, like a mouse, in addition to a keyboard. Instead of typing a textual command, the user of a graphical interface typically selects a button or menu selection with a pointing device such as a mouse and "clicks" on his selection.").

As per **Claim 84**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- establish a network connection with the server computer over the network after said receiving user input indicating the graphical program (see Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer.");
- wherein said receiving information describing the user interface and said receiving information regarding the graphical program are performed after said user input indicating the graphical program and after said establishing a network connection (see Column 9: 14-28, "A

standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer."').

However, Huntsman does not disclose:

- information regarding the block diagram of the graphical program.

Kodosky discloses:

- information regarding a block diagram of a graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include information regarding a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by sending block diagram information between the two computer systems.

As per **Claim 85**, the rejection of **Claim 84** is incorporated; and Huntsman further discloses:

- wherein the graphical program is already executing on the server computer when said establishing a network connection occurs (*see Column 8: 20-23, "The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."*).

As per **Claim 86**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- wherein to display the user interface of the graphical program, the program instructions are executable to display the user interface of the graphical program on a web browser (*see Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*).

As per **Claim 87**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- receive user input to the graphical program via the displayed user interface (*see Column 9: 42-50, "The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image."*); and

- provide the user input to the server computer over the network for input to the graphical program executing on the server computer (*see Column 9: 50-57, "The WWW browser,*

in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”).

As per **Claim 88**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- wherein the graphical program produces a first output state (*see Column 9: 31-41, “In response to the starter URL, the server program 21 builds a new file, a GIF image file containing the screen image of the GUI on the first computer, and returns the data of REMOTE.HTM.”*); and

- wherein said displaying the user interface includes displaying the user interface illustrating the first output state (*see Column 9: 42-50, “The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML “clickable” image.”*).

As per **Claim 89**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- wherein the graphical program produces a second output state after the graphical program produces a first output state (*see Column 9: 61-67 to Column 10: 1-6, “The server*

control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7."");

- receive a user interface update over the network indicating the second output state (see Column 10: 6-10, "Moments later, a user at the second computer 25 will typically select the "REFRESH" hypertext link which sends a reference of REMOTE.HTM of FIG. 10 to the first computer, repeating the behavior just described.""); and

- update the user interface in response to the user interface update (see Column 10: 6-10, "Moments later, a user at the second computer 25 will typically select the "REFRESH" hypertext link which sends a reference of REMOTE.HTM of FIG. 10 to the first computer, repeating the behavior just described."").

As per **Claim 90**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- receive user input specifying an edit to the graphical program (see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the

coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”); and

- *provide the user input specifying the edit to the server computer over the network (see Column 9: 50-57, “The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”);*

- *wherein the first computer is operable to edit the graphical program according to the user input specifying the edit (see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”).*

However, Huntsman does not disclose:

- *an edit to the block diagram of the graphical program.*

Kodosky discloses:

- *an edit to a block diagram of a graphical program (see Column 18: 47-51, “FIG. 25 shows the EDIT menu selections ... CLEAR is useful for removing items from the active window,*

e.g., selected wires and structures from the block diagram window, or controls from the front panel window. ").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include an edit to a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to edit the block diagram information from a remote location.

As per **Claim 91**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- wherein said indicating the graphical program comprises providing a uniform resource locator (URL) *(see Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer.").*

As per **Claim 92**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- display information indicating a plurality of graphical programs on the first computer (see Column 8: 20-23, *"The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."*); and

- wherein, in indicating the graphical program on the first computer, the user input selects the graphical program from the plurality of graphical programs (see Column 9: 47-50, *"The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image."*).

As per **Claim 93**, the rejection of **Claim 82** is incorporated; however, Huntsman does not disclose:

- wherein the user interface of the graphical program comprises at least one input variable icon for providing inputs to the block diagram and at least one output variable icon for displaying outputs produced by the block diagram.

Kodosky discloses:

- wherein a user interface of a graphical program comprises at least one input variable icon for providing inputs to a block diagram and at least one output variable icon for displaying outputs produced by the block diagram (see Column 8: 13-19, *"The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include wherein the user interface of the graphical program comprises at least one input variable icon for providing inputs to a block diagram and at least one output variable icon for displaying outputs produced by the block diagram. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to configure input and output data for a block diagram via a user interface.

As per **Claim 94**, the rejection of **Claim 82** is incorporated; and Huntsman further discloses:

- receive user input manipulating input of at least one input variable (*see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click."*);
- provide the user input of the at least one input variable to the server computer over the network (*see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the*

first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”);

- receive output of at least one output variable from the server computer over the network (see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”); and

- display the output of the at least one output variable (see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”).

However, Huntsman does not disclose:

- wherein the output is generated by the block diagram executing using the user input of the at least one input variable.

Kodosky discloses:

- wherein output is generated by a block diagram executing using user input of at least one input variable (*see Column 13: 47-55, "... execution instructions can be constructed by constructing a visual display in which at least one input variable produces at least output variable according to a displayed procedure."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include wherein the output is generated by a block diagram executing using the user input of the at least one input variable. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to edit the block diagram information from a remote location.

As per **Claim 95**, the rejection of **Claim 82** is incorporated; however, Huntsman does not disclose:

- wherein the graphical program implements a virtual instrument; and
- wherein the user interface of the graphical program comprises a front panel of the virtual instrument.

Kodosky discloses:

- wherein a graphical program implements a virtual instrument (*see Figure 3: 40*); and
- wherein a user interface of the graphical program comprises a front panel of the virtual instrument (*see Figure 3: 42*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include wherein the graphical program implements a virtual instrument; and wherein the user interface of the graphical program comprises a front panel of the virtual instrument. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 96**, Huntsman discloses:

- receiving user input to the second computer, wherein the user input indicates the graphical program on the first computer, wherein the first computer and the second computer are connected over a network (*see Column 9: 12-14, "The second computer 25 is connected to the first computer over the internet 31 ..."; Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer."*);
- receiving information describing the graphical user interface of the graphical program at the second computer from the first computer over the network during execution of the graphical program on the first computer (*see Column 9: 31-41, "In response to the starter URL, the server program 21 builds a new file, a GIF image file containing the screen image of the GUI on the first computer, and returns the data of REMOTE.HTM."*);

- receiving information regarding the graphical program at the second computer from the first computer over the network (*see Column 8: 20-23, "The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."; Column 9: 31-41, "REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image. In the preferred embodiment, the GIF file thus built is a 256 color image of the GUI screen of the first computer 19."*);

- displaying the graphical user interface of the graphical program on the second computer based on the information describing the graphical user interface (*see Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*); and

- displaying the graphical program on the second computer, using the information regarding the graphical program (*see Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."*);

- wherein the graphical user interface facilitates interaction between a user of the second computer and the graphical program executing on the first computer (*see Column 9: 42-50, "The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image."*).

However, Huntsman does not disclose:

- wherein the graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function; and
- information regarding the block diagram of the graphical program.

Kodosky discloses:

- wherein a graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function (*see Column 7: 44-59, "The execution subsystem 24 assigns at least one value to the input variable and executes the execution instructions to produce a value for the output variable. The control processor 26 implements the block diagram editor 22 and the execution subsystem 24 of the preferred embodiment."*; *Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*); and
- information regarding the block diagram of the graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to have the graphical program as a block diagram that comprises a

plurality of interconnected function icons representing graphical data flow of a desired function; and to include information regarding the block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 97**, the rejection of **Claim 96** is incorporated; and Huntsman further discloses:

- establish a network connection with the first computer over the network after said receiving user input indicating the graphical program (*see Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer."*);
- wherein said receiving information describing the graphical user interface and said receiving information regarding the graphical program are performed after said user input indicating the graphical program and after said establishing a network connection (*see Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer."*).

However, Huntsman does not disclose:

- information regarding the block diagram of the graphical program.

Kodosky discloses:

- information regarding a block diagram of a graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include information regarding a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by sending block diagram information between the two computer systems.

As per **Claim 98**, the rejection of **Claim 96** is incorporated; and Huntsman further discloses:

- wherein displaying the graphical user interface of the graphical program comprises displaying the graphical user interface of the graphical program on a web browser (*see Column 9: 42-50, "The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen*

image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image.").

As per **Claim 99**, the rejection of **Claim 96** is incorporated; and Huntsman further discloses:

- receiving user input to the graphical program via the displayed graphical user interface (*see Column 9: 42-50, "The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image."*); and
- providing the user input to the first computer over the network for input to the graphical program executing on the first computer (*see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click."*).

As per **Claim 100**, the rejection of **Claim 96** is incorporated; and Huntsman further discloses:

- receiving user input specifying an edit to the graphical program (*see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the*

region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”); and

- *providing the user input specifying the edit to the first computer over the network (see Column 9: 50-57, “The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”);*

- *wherein the user input specifying the edit is useable by the first computer to edit the graphical program (see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”).*

However, Huntsman does not disclose:

- *an edit to the block diagram of the graphical program.*

Kodosky discloses:

- *an edit to a block diagram of a graphical program (see Column 18: 47-51, “FIG. 25 shows the EDIT menu selections ... CLEAR is useful for removing items from the active window,*

e.g., selected wires and structures from the block diagram window, or controls from the front panel window.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include an edit to a block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to edit the block diagram information from a remote location.

As per **Claim 101**, the rejection of **Claim 96** is incorporated; however, Huntsman does not disclose:

- wherein the graphical user interface of the graphical program comprises at least one input variable icon for providing inputs to the block diagram and at least one output variable icon for displaying outputs produced by the block diagram.

Kodosky discloses:

- wherein a graphical user interface of a graphical program comprises at least one input variable icon for providing inputs to a block diagram and at least one output variable icon for displaying outputs produced by the block diagram (*see Column 8: 13-19, “The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42.”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include wherein the graphical user interface of the graphical program comprises at least one input variable icon for providing inputs to a block diagram and at least one output variable icon for displaying outputs produced by the block diagram. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to configure input and output data for a block diagram via a user interface.

As per **Claim 102**, the rejection of **Claim 96** is incorporated; and Huntsman further discloses:

- receiving user input manipulating input of at least one input variable (*see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click."*);
- providing the user input of the at least one input variable to the first computer over the network (*see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the*

first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.”);

- receiving output of at least one output variable from the first computer (*see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”); and*

- displaying the output of at least one output variable on the second computer (*see Column 9: 61-67 to Column 10: 1-6, “The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7.”).*

However, Huntsman does not disclose:

- wherein the output is generated by the block diagram executing using the user input of the at least one input variable.

Kodosky discloses:

- wherein output is generated by a block diagram executing using user input of at least one input variable (*see Column 13: 47-55, “... execution instructions can be constructed by*

constructing a visual display in which at least one input variable produces at least output variable according to a displayed procedure.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to include wherein the output is generated by a block diagram executing using the user input of the at least one input variable. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system by allowing a user to edit the block diagram information from a remote location.

As per **Claim 103**, the rejection of **Claim 96** is incorporated; however, Huntsman does not disclose:

- wherein the graphical program implements a virtual instrument; and
- wherein the user interface of the graphical program comprises a front panel of the virtual instrument.

Kodosky discloses:

- wherein a graphical program implements a virtual instrument (*see Figure 3: 40*); and
- wherein a user interface of the graphical program comprises a front panel of the virtual instrument (*see Figure 3: 42*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to

modify Huntsman's invention to include wherein the graphical program implements a virtual instrument; and wherein the user interface of the graphical program comprises a front panel of the virtual instrument. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

As per **Claim 104**, Huntsman discloses:

- a processor (see Figure 4: 25); and
- a memory (see Figure 4: 25), coupled to the processor;
- a network port operable to couple to a network (see Figure 4: 25 and 31);
- wherein the memory stores program instructions executable by the processor to:
 - receive user input specifying a graphical program (see Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5. URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer.");
 - provide the user input specifying the graphical program over a network to a server computer (see Column 9: 14-28, "A standard WWW "Web" browser 27 such as Netscape [8] is initiated on a second computer. To operate the remote control system 1, a user on the second computer 25 specifies the "starter URL" as specified by the coordinated naming convention 5.

URLs are defined by the WWW specification and include a named address of a target computer and a filename associated with the target computer.”);

- receive information describing a user interface of the graphical program from the server computer over the network during execution of the graphical program on the server computer (see Column 9: 31-41, “In response to the starter URL, the server program 21 builds a new file, a GIF image file containing the screen image of the GUI on the first computer, and returns the data of REMOTE.HTM.”);

- receive information regarding the graphical program from the server computer over the network (see Column 8: 20-23, “The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19.”; Column 9: 31-41, “REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image. In the preferred embodiment, the GIF file thus built is a 256 color image of the GUI screen of the first computer 19.”);

- display the user interface of the graphical program based on the information describing a user interface (see Column 9: 42-50, “The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML “clickable” image.”); and

- display the graphical program based on the information regarding the graphical program (see Column 9: 42-50, “The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file

containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."");

- wherein the user interface facilitates interaction between a user and the graphical program executing on the server computer (*see Column 9: 42-50, "The user in this embodiment will see a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image."*).

However, Huntsman does not disclose:

- wherein the graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function; and
- information regarding the block diagram of the graphical program.

Kodosky discloses:

- wherein a graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function (*see Column 7: 44-59, "The execution subsystem 24 assigns at least one value to the input variable and executes the execution instructions to produce a value for the output variable. The control processor 26 implements the block diagram editor 22 and the execution subsystem 24 of the preferred embodiment."*; *Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42."*); and
- information regarding the block diagram of the graphical program (*see Column 8: 8-23, "The virtual instrument 40 also includes a block diagram 46 which graphically provides a*

visual representation of a procedure by which a specified value for an input variable displayed in the front panel 42 can produce a corresponding value for an output variable in the front panel 42.”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kodosky into the teaching of Huntsman to modify Huntsman's invention to have the graphical program as a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function; and to include information regarding the block diagram of the graphical program. The modification would be obvious because one of ordinary skill in the art would be motivated to remotely control block diagram information of a virtual instrument that is executing on one computer system from another computer system.

Response to Arguments

14. Applicant's arguments filed on March 17, 2009 have been fully considered, but they are not persuasive.

In the Remarks, Applicant argues:

a) Regarding the cited col.9:31-50, Applicant respectfully notes that the Examiner cites Huntsman's sending of GUI information ("the GIF image file containing the screen image of the GUI on the first computer") with respect to both sending information describing a user interface of the graphical program over a network to the client computer system, and sending information

regarding the block diagram of the graphical program over the network to the client computer system. This is incorrect, and improper.

Per the citation, Huntsman's GIF file, as referenced by the REMOTE.HTM, presents the screen image of the client (first) computer, and REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image, and thus appears to be a GUI. As one of skill in the programming arts would readily understand, such a GUI is not a graphical program, nor, more specifically, a block diagram, as clearly defined in claim 59, where the graphical program includes the block diagram, and where the block diagram includes a plurality of interconnected function icons representing graphical data flow of a desired function, and where executing the graphical program includes executing the block diagram. Nor does Huntsman ever even mention or hint at a graphical program.

Examiner's response:

a) Examiner disagrees. With respect to the Applicant's assertion that one of skill in the programming arts would readily understand that such a GUI is not a graphical program, as previously pointed out in the Non-Final Rejection (mailed on 12/31/2008) and further clarified hereinafter, the Examiner respectfully submits that Huntsman clearly discloses "send[ing] information regarding the graphical program over the network to the client computer system" (see Column 8: 20-23, "The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."; Column 9: 31-50, "REMOTE.HTM contains appropriate HTML references to the GIF file so that the GIF file will be displayed as a clickable image. In the preferred

embodiment, the GIF file thus built is a 256 color image of the GUI screen of the first computer 19. The browser 27 on the second computer 25 will decode the HTML document file, and locate the references to the GIF file, request and retrieve the GIF file containing the screen image in a separate HTTP request, and display the GIF image on the screen of the second computer 25, as an HTML "clickable" image."). Note that Huntsman discloses that the GUI program can be any MS-Windows program. Thus, one of ordinary skill in the art would readily comprehend that a MS-Windows program is a graphical program (*e.g.*, panels and windows) that is manipulated by a user via a GUI (*e.g.*, buttons and menus). Further note that REMOTE.HTM contains HTML references for both GUI features and graphical program features of the executing GUI program represented by the GIF file. The GIF file is a color image of the executing GUI program and displayed as a clickable image. Thus, one of ordinary skill in the art would also readily comprehend that the GIF file represents the GUI features and the graphical program features of the executing GUI program.

Therefore, for at least the reason set forth above, the rejections made under 35 U.S.C. § 103(a) with respect to Claims 59, 73, and 81 are proper and therefore, maintained.

In the Remarks, Applicant argues:

b) Kodosky discusses graphical programs, including a block diagram, but nowhere discloses sending information regarding a block diagram over a network for use in displaying the block diagram. Applicant notes that the citation (col.8:8-23) simply describes a graphical program's block diagram and front panel (GUI), but says nothing regarding sending information regarding a block diagram over a network for display of the block diagram. Said another way, Kodosky

discloses graphical programs, but nowhere teaches sending information regarding a block diagram of a graphical program over a network to a client system for display. Applicant submits that Huntsman's sending of GUI information and Kodosky's graphical program in combination do not produce this limitation of claim 59.

Examiner's response:

b) Examiner disagrees. Applicant's arguments are not persuasive for at least the following reasons:

First, with respect to the Applicant's assertion that nowhere does Kodosky teach sending information regarding a block diagram of a graphical program over a network to a client system for display, as previously pointed out in the Non-Final Rejection (mailed on 12/31/2008) and further clarified hereinafter, the Examiner respectfully submits that Kodosky is relied upon for its specific teaching of information regarding the block diagram of the graphical program.

Huntsman clearly discloses sending information regarding the graphical program over a network to a client system for display as discussed in the Examiner's response (a) hereinabove and thus, the Applicant's argument regarding Kodosky not teaching sending information regarding a block diagram of a graphical program over a network to a client system for display is, at best, moot.

Thus, in view of the teaching of Kodosky and the teaching of Huntsman and the state of the art, one of ordinary skill in the art would be motivated to incorporate the block diagram information of the GUI-based graphical program of a virtual instrument of Kodosky into Huntsman in order to allow the block diagram information of the virtual instrument to be remotely controlled by a user.

Second, the Examiner further submits that Huntsman is within the field of the Applicant's endeavor and hence is analogous prior art because Huntsman's invention is directed to a remote control system for remotely controlling a Microsoft Windows® or other GUI-based first computer from a second computer over the Internet using only a standard world-wide-web hypertext browser on the second computer. Kodosky is concerned with the same problem which the Applicant sought to be solved and hence is analogous prior art because Kodosky's invention is directed to a method for programming a computer system to control at least one of a virtual instrument and an instrument. Therefore, it is permissible to combine the teaching of Kodosky into the teaching of Huntsman to include the limitations disclosed by Kodosky since knowledge generally available to one of ordinary skill in the art provides a reason for combining the elements in the manner claimed. See MPEP § 2141.01(a).

Therefore, for at least the reasons set forth above, the rejections made under 35 U.S.C. § 103(a) with respect to Claims 59, 73, and 81 are proper and therefore, maintained.

In the Remarks, Applicant argues:

c) The Office Action again cites Huntsman's col.9:31-41, which describes REMOTE.HTM with references to a GIF file that represents the screen/interface for the server computer, referring to it as information regarding a graphical program, which is incorrect, at least because REMOTE.HTM and GIF file relate to Huntsman's interface, not a block diagram. The Office Action then cites Kodosky's col.7:44-59 and col.8:8-23, which describe a block diagram and its execution, but says nothing about sending information about a block diagram over a network. In

fact, nowhere does Kodosky teach or suggest receiving such information from a server computer over a network, nor displaying a block diagram based on such received information.

Examiner's response:

c) Examiner disagrees. With respect to the Applicant's assertion that Kodosky says nothing about sending information about a block diagram over a network, the Examiner respectfully submits that the Examiner has addressed the Applicant's argument in the Examiner's responses (a) and (b) hereinabove.

Therefore, for at least the reasons set forth above, the rejections made under 35 U.S.C. § 103(a) with respect to Claims 82, 96, and 104 are proper and therefore, maintained.

In the Remarks, Applicant argues:

d) Cited col.8:20-23 discusses an executing GUI program, such as the MS-Windows program manager, and is not germane to graphical programs. Cited col.9:47-50 describes presenting a Windows screen remotely, where the user may click on a menu, button, or other Windows control image, but says nothing whatsoever about providing information indicating a plurality of graphical programs to a client computer system over a network, nor, more particularly, where the information indicating a plurality of graphical programs is usable by the client computer system to display information indicating the plurality of graphical programs, whereby user input may select a graphical program from the plurality of graphical programs. Nor does Kodosky teach this feature, nor Kodosky in combination with Huntsman.

Examiner's response:

d) Examiner disagrees. With respect to the Applicant's assertion that Huntsman says nothing whatsoever about providing information indicating a plurality of graphical programs to a client computer system over a network, nor, more particularly, where the information indicating a plurality of graphical programs is usable by the client computer system to display information indicating the plurality of graphical programs, whereby user input may select a graphical program from the plurality of graphical programs, as previously pointed out in the Non-Final Rejection (mailed on 12/31/2008) and further clarified hereinafter, the Examiner respectfully submits that Huntsman clearly discloses "provid[ing] information indicating a plurality of graphical programs to the client computer system over the network, wherein the information indicating a plurality of graphical programs is usable by the client computer system to display information indicating the plurality of graphical programs" (*see Column 8: 20-23, "The executing GUI program 23 can be any MS-Windows program including the program manager, and is generally whatever program is in the foreground of the first computer 19."*). Note that as discussed in the Examiner's response (a) hereinabove, REMOTE.HTM contains HTML references for the executing GUI program represented by a GIF file. The executing GUI program can be any MS-Windows program and is generally whatever program in the foreground of the first computer. Thus, one of ordinary skill in the art would readily comprehend that there are other GUI programs (plurality of graphical programs) in the background of the first computer which the user can select from in order to be controlled. Huntsman also discloses "wherein, in indicating the graphical program for execution, the user input selects the graphical program from the plurality of graphical programs" (*see Column 9: 47-50, "The user in this embodiment will see*

a screen virtually identical to the GUI screen on the first computer. The user may then click on a menu, button, or other Windows control image.”). Note that the user may control the GUI screen of the first computer to select a GUI program, either in the foreground or background, to control.

Therefore, for at least the reason set forth above, the rejection made under 35 U.S.C. § 103(a) with respect to Claim 60 is proper and therefore, maintained.

In the Remarks, Applicant argues:

e) Cited col.9:31-50 describes sending REMOTE.HTM with references to a GIF file that represents the screen/interface for the server computer, referring to it as information regarding a graphical program, which is incorrect, at least because REMOTE.HTM and GIF file relate to Huntsman's interface, not a block diagram. This text says nothing about a graphical program at all, much less sending information regarding a graphical program (nor, more specifically, a block diagram) to client computers over a network, nor, more particularly, where the information is usable by each client computer to display the graphical program or block diagram. A GUI is not a graphical program, as explained at length above, and thus Huntsman's sending of information for a GUI is not germane to sending information regarding a block diagram. Nor does combining Kodosky's block diagram with Huntsman's sending of GUI information remedy this deficiency- the combination still doesn't teach or suggest sending information regarding a block diagram over a network to a plurality of client computers for display on the client computers.

Examiner's response:

e) Examiner disagrees. With respect to the Applicant's assertion that the combination of Huntsman and Kodosky doesn't teach or suggest sending information regarding a block diagram over a network to a plurality of client computers for display on the client computers, the Examiner respectfully submits that the Examiner has addressed the Applicant's argument in the Examiner's responses (a) and (b) hereinabove.

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. § 103(a) with respect to Claim 65 is proper and therefore, maintained.

In the Remarks, Applicant argues:

f) Cited col.9:50-57 describes a web browser determining mouse coordinates (and HTML mode variables) with respect to the presented GUI/screen, and sending these coordinates to the URL-addressed computer, but says nothing about a block diagram at all, much less receiving user input over the network editing a block diagram, and editing a block diagram accordingly. Nor does combining Kodosky's block diagram with Huntsman's sending of mouse coordinate and mode information remedy this deficiency, at least because Kodosky nowhere even hints at editing a block diagram remotely as claimed.

Examiner's response:

f) Examiner disagrees. With respect to the Applicant's assertion that the combination of Huntsman and Kodosky says nothing about receiving user input over the network editing a block diagram, and editing a block diagram accordingly, the Examiner respectfully submits that the combination of Huntsman and Kodosky clearly discloses the claimed feature of receiving user

input over the network editing a block diagram, and editing a block diagram accordingly. As previously pointed out in the Non-Final Rejection (mailed on 12/31/2008) and further clarified hereinafter, Huntsman clearly discloses "receiv[ing] user input specifying an edit to the graphical program from the client software over the network" (see Column 9: 50-57, "The WWW browser, in accordance with HTML/HTTP protocol [9,6,7], will determine the coordinates pointed to be the mouse. The coordinates will be sent to the URL associated with the region in the map file, which will contain the address of the first computer. In addition to the coordinates, the HTML mode variables defined by the coordinated naming convention 5 will also be transmitted as the result of a click.") and "edit[ing] the graphical program according to the user input specifying the edit" (see Column 9: 61-67 to Column 10: 1-6, "The server control program 21 on the first computer 19 converts the HTML URL selection to GUI control commands using the hypertext-to-GUI-response means 7, and interpret the associated filename as a selection for the corresponding control according to the coordinated naming convention 5, and programmatically select the control or perform other action as request by the MODE and KEYTEXT variables using the programmatic-GUI-control-execution means 13 of the hypertext-to-GUI-response means 7."). However, Huntsman does not disclose specifying an edit to the block diagram of the graphical program. Examiner relied upon Kodosky for its specific teaching of specifying an edit to the block diagram of the graphical program (see Column 18: 47-51, "FIG. 25 shows the EDIT menu selections ... CLEAR is useful for removing items from the active window, e.g., selected wires and structures from the block diagram window, or controls from the front panel window."). Thus, in view of the teaching of Kodosky and the teaching of Huntsman and the state of the art, one of ordinary skill in the art would be motivated to

incorporate the block diagram information of the GUI-based graphical program of a virtual instrument of Kodosky into Huntsman in order to allow the block diagram information of the virtual instrument to be remotely edited by a user.

Therefore, for at least the reason set forth above, the rejection made under 35 U.S.C. § 103(a) with respect to Claim 69 is proper and therefore, maintained.

In the Remarks, Applicant argues:

g) In the Response to Arguments, the Examiner asserts that Applicant's arguments failed to comply with 37 CFR 1.11 I(b) because "they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicant respectfully disagrees, noting that Applicant has simply explained how the Office Actions have failed to show that the cited art discloses the subject matter of Applicant's claims, and has further explained that the references cannot teach key limitations of the claims.

Examiner's response:

g) Examiner disagrees. With respect to the Applicant's assertion that the Applicant has further explained that the references cannot teach key limitations of the claims, the Examiner respectfully submits that on pages 16-18 of the "Remarks" (received on 10/20/2008), the Applicant has merely provided broad statements characterizing the prior art as failing to teach or suggest certain features of the claimed invention. Thus, the Applicant has failed to present any argument against the Examiner's interpretation of the claims and specifically point out the details

in Huntsman and Kodosky that support the Applicant's assertion that Huntsman and Kodosky fail to teach or suggest certain features of the claimed invention. Mere statements concluding that the prior art does not disclose or suggest a particular claim limitation without any supporting argument or evidence is a general allegation.

In the Remarks, Applicant argues:

h) Regarding the Examiners assertion that Applicant has improperly only attacked the references individually, Applicant respectfully disagrees. Applicant has rebutted specific assertions by the Examiner regarding what each individual references teaches, particularly Huntsman, and respectfully notes that the Examiner's combination argument relies on these assertions, and so fails when the assertions are incorrect. Applicant has also addressed the fact that in combination, these references also fail to produce Applicant's claimed embodiments.

Examiner's response:

h) Examiner disagrees. With respect to the Applicant's assertion that the Applicant has addressed the fact that in combination, the references fail to produce the Applicant's claimed embodiments, the Examiner respectfully submits that on pages 16-18 of the "Remarks" (received on 10/20/2008), the Applicant has failed to take into consideration Huntsman in view of Kodosky, but instead, merely argued the shortcomings of both Huntsman and Kodosky in a vacuum. Thus, the Applicant has improperly attacked the references individually where the rejections are based on combinations of references.

In the Remarks, Applicant argues:

- i) The Office Action further asserts that Huntsman's Abstract teaches a graphical program as recited in the independent claims. The cited Abstract reads thusly:

A remote control system for remotely controlling a Microsoft Windows or other GUI-based first computer from a second computer over the internet using only a standard world-wide-web hypertext browser on the second computer. The second controlling computer may be dissimilar from the first controlled computer user interface, underlying operating system, and hardware architecture.

As may be seen, nowhere does this citation mention, or even hint at, a graphical program as defined in the claims, specifically, "wherein the graphical program includes a block diagram that comprises a plurality of interconnected function icons representing graphical data flow of a desired function". Thus, the Office Action's assertion is incorrect.

Examiner's response:

- i) Examiner disagrees. With respect to the Applicant's assertion that Huntsman's abstract does not mention, or even hint at, a graphical program as defined in the claims, as previously pointed out in the Non-Final Rejection (mailed on 12/31/2008) and further clarified hereinafter, the Examiner respectfully submits that Huntsman's abstract clearly discloses a graphical program. In the abstract, Huntsman discloses a Microsoft Windows® or other GUI-based first computer. Thus, those of ordinary skill in the art would readily recognize that Microsoft Windows® or other GUI-based programs are graphical programs. In the Non-Final Rejection (mailed on 12/31/2008), the Examiner did not assert that Huntsman discloses a graphical program as defined in the claims (*i.e.*, a block diagram) as averred by the Applicant.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191